Waiver 193.2175 Lower Valley Power & Light

May 30, 1997

U.S. Department of Transportation
Research and Special Programs Administration
400 Seventh Street S.W.
Washington, D.C. 20590

Mr. Jon F. Jacquot
Engineering Supervisor
Public Service Commission
The State of Wyoming
Hansen Building, Suite 300
2515 Warren Ave.
Cheyenne, WY 82002

Dear Mr. Jacquot:

As required by 49 U.S.C. 60118 (d), your letter of April 18, 1997, forwarded a waiver of compliance from the requirements of 49 CFR § 193.2175 granted by the State of Wyoming Public Service Commission on March 6, 1997, to Lower Valley Power and Light, Inc. (Lower Valley), to construct two small-scale LNG facilities in Jackson and Afton, Wyoming. The waiver would allow Lower Valley to locate (l) two shop-fabricated LNG storage tanks, each with a capacity of approximately 17,100 gallons within a single class 2 impoundment system at Afton, and (2) three shop fabricated LNG storage tanks, each with a capacity of approximately 59,000 gallons within a single class 2 impoundment system at Jackson. Lower Valley proposed to locate the tanks within a single impoundment at Afton and Jackson in order to use land already owned by the company, thereby reducing installation and maintenance costs.

In accordance with Section 193.2181, each impounding system will have a volumetric capacity equal to look of the total capacity of all the tanks within the impounding system. In addition, the proposed impounding systems are designed to meet the "thermal radiation protection" siting requirements. Therefore, even if it is assumed that all tanks within the impounding system have failed and there is a fully-involved impounding area fire, the safety systems will be adequate to contain the situation.

The Commission granted Lower Valley's request for waiver from § 193.2175 subject to its commitment to meet all other requirements of Part 193, including installation of a system to detect and extinguish fires within the impoundment areas.

Section 193.2175 does permit an impounding system serving more than one LNG storage tank, as long as a means is provided to prevent low temperature or fire resulting from failure of any one of the storage tanks from causing any other storage tank to leak. Although, the code is aimed at large-scale LNG plants, and does not specifically address, with a few exceptions (e.g., seismic design and tank instrumentation), "shop fabricated" tanks of 70,000 gallons or less capacity, it applies to all LNG storage tanks. RSPA recognizes that LNG in small-scale plants is stored at higher pressures (typically 100 to 250 psig design pressure) and temperatures that are well above LNG's boiling point. Therefore, LNG released from a

small-scale plant does not behave the same as a release from a large-scale plant. However, as explained in Lower Valley's application for waiver, shop-built tanks are less likely to fail under extreme conditions due to the inherent strength of the inner tank and due to the tank supports, which are constructed of cryogenically compatible materials.

Therefore, based on the reasons presented in your grant of waiver, the Research and Special Programs Administration does not object to the grant of waiver of those provisions of 49 CFR Part 193 as specified in the waiver request.

Sincerely,

Richard B. Felder
Associate Administrator for Pipeline Safety

c: OPS Central Region